

CLAIMS

1. An apparatus for displacing preheated members for a twin-roll caster, characterized in that a casting roll unit having side weirs and a delivery nozzle detachable therefrom is arranged in a casting position, side-weir and delivery-nozzle preheating furnaces being arranged away from said casting roll unit, a displacing robot being arranged adjacent to said casting roll unit, said displacing robot being capable of selectively clamping the side weirs and the delivery nozzle to be displaced between the casting roll unit and the side-weir preheating furnace or between the casting roll unit and the delivery-nozzle preheating furnace for installation/removal of the side weirs or the delivery nozzle.

2. The apparatus for displacing preheated members for a twin-roll caster according to claim 1, characterized by two displacing robots spaced apart from each other widthwise of the casting roll unit, said displacing robots being arranged between the casting roll unit and the side-weir and delivery-nozzle preheating furnaces, said furnaces being spaced apart from each other perpendicularly of the widthwise direction of the casting roll unit.

3. The apparatus for displacing preheated members for a twin-roll caster according to claim 1, characterized in that said displacing robot comprises a clamp device with side-weir and delivery-nozzle clamps at its tip, at least three articulate mechanism with three arms and at least two swivel mechanisms, the first swivel mechanism being capable of switching object or objects to be clamped by rotating the clamp device in a vertical plane, the first articular mechanism being capable of keeping vertical the side weir or delivery nozzle clamped by the clamp device, the second and third articular mechanisms being capable of vertically moving the side weir or delivery nozzle clamped to install/remove it onto/from the casting roll unit and the side-weir or delivery-nozzle preheating furnace, the second swivel mechanism being capable of swiveling the clamped side weir or delivery nozzle to displace it between the casting roll unit and the side-weir or delivery-nozzle preheating furnace.

4. The apparatus for displacing preheated members for a twin-roll caster according to claim 2, characterized in that each of said displacing robots comprises a clamp device with side-weir and delivery-nozzle clamps at its tip, at least three articulate mechanism with three arms and at least two swivel mechanisms, the first swivel

mechanism being capable of switching object or objects to be clamped by rotating the clamp device in a vertical plane, the first articular mechanism being capable of keeping vertical the side weir or delivery nozzle clamped by the clamp device, the second and third articular mechanisms being capable of vertically moving the side weir or delivery nozzle clamped to install/remove it onto/from the casting roll unit and the side-weir or delivery-nozzle preheating furnace, the second swivel mechanism being capable of swiveling the clamped side weir or delivery nozzle to displace it between the casting roll unit and the side-weir or delivery-nozzle preheating furnace.

5. The apparatus for displacing preheated members for a twin-roll caster according to claim 3, characterized in that a water cooler is provided for each of said clamp devices and said arms.

6. The apparatus for displacing preheated members for a twin-roll caster according to claim 4, characterized in that a water cooler is provided for each of said clamp devices and said arms.

7. The apparatus for displacing preheated members for a

twin-roll caster according to claim 3, characterized in that expandable and contractible heat insulators are provided for said clamp device, the respective swivel mechanisms and the respective articular mechanisms so as to prevent them from heat.

8. The apparatus for displacing preheated members for a twin-roll caster according to claim 4, characterized in that expandable and contractible heat insulators are provided for said clamp devices, the respective swivel mechanisms and the respective articular mechanisms so as to prevent them from heat.

9. The apparatus for displacing preheated members for a twin-roll caster according to claim 5, characterized in that expandable and contractible heat insulators are provided for said clamp device, the respective swivel mechanisms and the respective articular mechanisms so as to prevent them from heat.

10. An apparatus for displacing preheated members for a twin-roll caster according to claim 6, characterized in that expandable and contractible heat insulators are provided for said clamp devices, the respective swivel mechanisms and the respective articular mechanisms so as

to prevent them from heat.